

WHAT IS CLAIMED IS:

1. A video decoder adapted to reconstruct corrupted video data comprising:
  - a receiver circuit adapted to receive a video bitstream;
  - a buffer coupled to the receiver circuit, where the buffer is adapted to store at least a portion of the video bitstream;
  - a parsing circuit adapted to distinguish video data from forward error correction (FEC) codes;
  - an error monitoring circuit configured to detect corruption in the video data; and

an FEC decoder adapted to receive the video data and the FEC codes, where the FEC decoder is configured to remove the corruption in the video data to which the FEC codes apply.
2. The video decoder as defined in Claim 1, wherein the FEC decoder decodes FEC codes that correspond to Bose-Chaudhuri-Hocquenghem (BCH) codes.
3. The video decoder as defined in Claim 1, wherein the buffer is a ring buffer.
4. The video decoder as defined in Claim 1, wherein the parsing circuit is configured to retrieve the video data from a packet for a video object plane (VOP) and retrieving the FEC codes from a user data video packet associated with the VOP.
5. A video decoder that decodes a video bitstream that includes forward error correction (FEC) codes, the video decoder comprising:
  - means for receiving the video bitstream, which includes both video data and FEC codes;
  - means for retrieving video data from the video bitstream;
  - means for determining if there is corruption in a portion of the video data retrieved;
  - means for retrieving FEC codes from the video bitstream in response to a detection of corruption; and
  - means for using the FEC codes to reconstruct the portion of the video data such that the portion of the video data is recovered without corruption.

6. A process of decoding a video bitstream that includes forward error correction (FEC) codes, the process comprising:

receiving the video bitstream, which includes both video data and FEC codes;  
retrieving video data from the video bitstream;  
determining if there is corruption in a portion of the video data retrieved;  
retrieving FEC codes from the video bitstream in response to a detection of corruption; and  
using the FEC codes to reconstruct the portion of the video data such that the portion of the video data is recovered without corruption.

7. The process as defined in Claim 6, wherein the FEC codes correspond to Bose-Chaudhuri-Hocquenghem (BCH) codes.

8. The process as defined in Claim 6, further comprising:

storing the video bitstream in a buffer;  
retrieving the video data from the buffer when retrieving video data from the video bitstream; and  
retrieving the FEC codes from the buffer when retrieving the FEC codes from the video bitstream.

9. The process as defined in Claim 8, wherein the buffer is a ring buffer.

10. The process as defined in Claim 6, further comprising retrieving the video data from a packet for a video object plane (VOP) and retrieving the FEC codes from a user data video packet associated with the VOP.

11. The process as defined in Claim 6, further comprising receiving a header code that specifies a subset of video data to which the FEC codes correspond, and applying the FEC codes only to the subset of video data.

12. The process as defined in Claim 6, further comprising concealing an error in a corresponding pixel with a gray color pixel when the portion of the video data cannot be recovered without corruption.

13. A process of decoding a video bitstream that includes forward error correction (FEC) codes, the process comprising:

receiving the video bitstream, which includes both video data and FEC codes;

retrieving video data from the video bitstream;  
determining if FEC codes that correspond to the retrieved video data are available;  
retrieving FEC codes from the video bitstream when the FEC codes are available; and  
using the FEC codes to decode the portion of the video data such that the portion of the video data is recovered without corruption.

14. The process as defined in Claim 13, wherein the FEC codes correspond to Bose-Chaudhuri-Hocquenghem (BCH) codes.

15. The process as defined in Claim 13, further comprising:  
storing the video bitstream in a buffer;  
retrieving the video data from the buffer when retrieving video data from the video bitstream; and  
retrieving the FEC codes from the buffer when retrieving the FEC codes from the video bitstream.

16. The process as defined in Claim 15, wherein the buffer is a ring buffer.

17. The process as defined in Claim 13, further comprising retrieving the video data from a packet for a video object plane (VOP) and retrieving the FEC codes from a user data video packet associated with the VOP.

18. The process as defined in Claim 13, further comprising receiving a header code that specifies a subset of video data to which the FEC codes correspond, and applying the FEC codes only to the subset of video data.